REMARKS

This Application has been carefully reviewed in light of the Final Office Action. Applicants appreciate the Examiner's consideration of the Application. In order to advance prosecution of this Application, Applicants have responded to each notation by the Examiner. Applicants respectfully request reconsideration and favorable action in this case.

Section 103(a) Rejection

The Examiner rejects Claims 1-5, 7-10, 12-15, and 17-20 under 35 U.S.C. § 103(a) over U.S. Patent No. 6,553,423 issued to Chen ("*Chen*"), U.S. Patent Application Pub. No. 2003/0112799 filed by Chandra et al. ("*Chandra*"), and "On Inferring Autonomous System Relationship in the Internet" by Gao ("*Gao*"); and Claims 6, 11, 16, and 21 over *Chen*, *Chandra*, *Gao*, and U.S. Patent Application Pub. No. 2006/0182034 filed by Klinker ("*Klinker*"). Applicants respectfully traverse this rejection for the reasons discussed below.

Applicants respectfully submit that the combinations of references proposed by the Examiner fail to disclose, teach, or suggest elements specifically recited in Applicants' claims. For example, the *Chen-Chandra-Gao* combination proposed by the Examiner fails to disclose, teach, or suggest the following recited in amended independent Claim 1:

> a network element included in a first autonomous system that:
> constructs a directed graph comprising a plurality of nodes and a plurality of edges, a node representing an autonomous system, an edge representing a connection between two autonomous systems, the edges marked tentative;
>
> ...
>
> if there is two-way connectivity between the first and second autonomous systems, marks the edge representing the connection between the first and second autonomous systems as verified; and
> if there is no two-way connectivity between the first and second autonomous systems, removes the edge representing the connection between the first and second autonomous systems from the directed graph.

Gao discloses modeling connectivity between autonomous systems (ASs) as an AS graph:

> We can model the connectivity between ASs in the Internet using an AS graph $G = (V, E)$, where the node set V consists of ASs and the edge set E consists of AS pairs that exchange traffic with each other.

(*Gao*, p. 734, ll. 1-4.) *Gao*, however, fails to disclose, teach, or suggest verification of the connections. Accordingly, *Gao* fails to disclose, teach, or suggest the above elements of amended Claim 1.

For at least these reasons, independent Claim 1 and its dependent claims are allowable under 35 U.S.C. § 103. For analogous reasons, independent Claims 7, 12, and 17 and their respective dependent claims are allowable under 35 U.S.C. § 103. Accordingly, Applicants respectfully request reconsideration and allowance of all pending claims.

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CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all the pending claims.

If the Examiner believes a telephone conference would advance prosecution of this case in any way, the Examiner is invited to contact Keiko Ichiye, the Attorney for Applicants, at the Examiner's convenience at (214) 953-6494.

Although Applicants believe no fees are due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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